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40 CFR Ch. I (7–1–13 Edition)

Trench means a narrow channel or depression built into the length of a cell room floor that leads washdown materials to a drain.

Vent hose means a connection for transporting gases from the mercury cell.

Virgin mercury means mercury that has not been processed in an onsite mercury thermal recovery unit or otherwise recovered from mercury-containing wastes onsite.

Washdown means the act of rinsing a floor or surface with a stream of aqueous liquid to cleanse it of a liquid mercury spill or accumulation, generally by driving it into a trench.

Week means any consecutive seven-day period.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

TABLE 1 TO SUBPART IIII OF PART 63—WORK PRACTICE STANDARDS—DESIGN, OPERATION, AND MAINTENANCE REQUIREMENTS

As stated in §63.8192, you must meet the work practice standards in the following table:

For . . .	You must . . .
1. Cell rooms	<ul style="list-style-type: none"> a. For new or modified cell rooms, construct each cell room interior using materials that are resistant to absorption of mercury, resistant to corrosion, facilitate the detection of liquid mercury spills or accumulations, and are easy to clean. b. Limit access around and beneath mercury cells in each cell room to prevent liquid mercury from being tracked into other areas. c. Provide adequate lighting in each cell room to facilitate the detection of liquid mercury spills or accumulations. d. Minimize the number of items stored around and beneath cells in each cell room.
2. Mercury cells and electrolyzers.	<ul style="list-style-type: none"> a. Operate and maintain each electrolyzer, decomposer, end box, and mercury pump to minimize leakage of mercury. b. Prior to opening an electrolyzer for maintenance, do the following: (1) Complete work that can be done before opening the electrolyzer in order to minimize the time required to complete maintenance when the electrolyzer is open; (2) fill the electrolyzer with an aqueous liquid, when possible; (3) allow the electrolyzer to cool before opening; and (4) schedule and staff maintenance of the electrolyzer to minimize the time the electrolyzer is open. c. When the electrolyzer top is raised and before moving the top and anodes, thoroughly flush all visible mercury from the top and the anodes with an aqueous liquid, when possible. d. While an electrolyzer is open, keep the bottom covered with an aqueous liquid or maintain a continuous flow of aqueous liquid, when possible. e. During an electrolyzer side panel change, take measures to ensure an aqueous liquid covers or flows over the bottom, when possible. f. Each time an electrolyzer is opened, inspect and replace components, as appropriate. g. If you step into an electrolyzer bottom, either remove all visible mercury from your footwear or replace them immediately after stepping out of the electrolyzer. h. If an electrolyzer is disassembled for overhaul maintenance or for any other reason, chemically clean the bed plate or thoroughly flush it with an aqueous liquid. i. Before transporting each electrolyzer part to another work area, remove all visible mercury from the part or contain the part to prevent mercury from dripping during transport. j. After completing maintenance on an electrolyzer, check any mercury piping flanges that were opened for liquid mercury leaks. k. If a liquid mercury spill occurs during any maintenance activity on an electrolyzer, clean it up in accordance with the requirements in Table 3 to this subpart.
3. Vessels in liquid mercury service.	If you replace a vessel containing mercury that is intended to trap and collect mercury after December 19, 2003, replace it with a vessel that has a cone shaped bottom with a drain valve or other design that readily facilitates mercury collection.
4. Piping and process lines in liquid mercury service.	a. To prevent mercury buildup after December 19, 2003, equip each new process line and piping system with smooth interiors and adequate low point drains or mercury knock-out pots to avoid liquid mercury buildup within the pipe and to facilitate mercury collection and recovery.
5. Cell room floors	<ul style="list-style-type: none"> a. Maintain a coating on cell room floors that is resistant to absorption of mercury and that facilitates the detection of liquid mercury spills or accumulations. b. Maintain cell room floors such that they are smooth and free of cracking and spalling. c. Maintain the cell room floor to prevent mercury accumulation in the corners. d. Maintain a layer of aqueous liquid on liquid mercury contained in trenches or drains and replenish the aqueous layer at least once per day. e. Keep the cell room floor clean and free of debris. f. If you step into a liquid mercury spill or accumulation, either remove all visible mercury from your footwear or replace your footwear immediately.
6. End boxes	a. Either equip each end box with a fixed cover that is leak tight, or route the end box head space to an end box ventilation system.

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For . . .	You must . . .
	<p>b. For each end box ventilation system: maintain a flow of aqueous liquid over the liquid mercury in the end box and maintain the temperature of the aqueous liquid below its boiling point, maintain a negative pressure in the end box ventilation system, and maintain the end box ventilation system in good condition.</p> <p>c. Maintain each end box cover in good condition and keep the end box closed when the cell is in service and when liquid mercury is flowing down the cell, except when operation or maintenance activities require short-term access.</p> <p>d. Keep all bolts and C-clamps used to hold the covers in place when the cell is in service and when liquid mercury is flowing down the cell.</p> <p>e. Maintain each access port stopper in an end box cover in good sealing condition and keep each end box access port closed when the cell is in service and when liquid mercury is flowing down the cell.</p>
7. Decomposers	<p>a. Maintain each decomposer cover in good condition and keep each decomposer closed and sealed, except when maintenance activities require the cover to be removed.</p> <p>b. Maintain connections between the decomposer and the corresponding cell components, hydrogen system piping, and caustic system piping in good condition and keep the connections closed/tight, except when maintenance activities require opening/loosening these connections.</p> <p>c. Keep each mercury cell amalgam seal pot closed and sealed, except when operation or maintenance activities require short-term access.</p> <p>d. Prior to opening a decomposer, do the following: fill the decomposer with an aqueous liquid or drain the decomposer liquid mercury into a container that meets requirements in Table 1, Item 9 or 10, allow the decomposer to cool before opening, and complete work that can be done before opening the decomposer.</p> <p>e. Take precautions to avoid mercury spills when changing graphite grids or balls in horizontal decomposers or graphite packing in vertical decomposers. If a spill occurs, you must clean it up in accordance with the requirements in Table 3 to this subpart.</p> <p>f. After each maintenance activity, use an appropriate technique (Table 6 to this subpart) to check for hydrogen leaks.</p> <p>g. Before transporting any internal part from the decomposer (such as the graphite basket) to another work area, remove all visible mercury from the part or contain the part to prevent mercury from dripping during transport.</p> <p>h. Store carbon from decomposers in accordance with the requirements in 40 CFR part 265, subparts I and CC, until the carbon is treated or is disposed.</p>
8. Submerged mercury pumps	<p>a. Provide a vapor outlet connection from each submerged pump to an end box ventilation system. The connection must be maintained under negative pressure.</p> <p>b. Keep each mercury pump tank closed, except when maintenance or operation activities require the cover to be removed.</p> <p>c. Maintain a flow of aqueous liquid over the liquid mercury in each mercury pump tank and maintain the aqueous liquid at a temperature below its boiling point.</p>
9. Open-top containers holding liquid mercury.	<p>Maintain a layer of aqueous liquid over liquid mercury in each open-top container. Replenish the aqueous layer at least once per day and, when necessitated by operating procedures or observation, collect the liquid mercury from the container in accordance with the requirements in Table 4 to this subpart.</p>
10. Closed containers used to store liquid mercury.	<p>a. Store liquid mercury in containers with tight fitting covers.</p> <p>b. Maintain the seals on the covers in good condition.</p> <p>c. Keep each container securely closed when mercury is not being added to, or removed from, the container.</p>
11. Caustic systems	<p>a. Maintain the seal between each caustic basket cover and caustic basket by using gaskets and other appropriate material.</p> <p>b. Do not allow solids and liquids collected from back-flushing primary caustic filters to contact floors or run into open trenches.</p> <p>c. Collect solids and liquids from back-flushing each primary caustic filter and collect these mercury-containing wastes in process vessels or in accordance with the requirements in 40 CFR part 265, subparts I and CC.</p> <p>d. Keep each caustic basket closed and sealed, except when operation or maintenance activities require short term access.</p>
12. Hydrogen systems	<p>a. Collect drips from each hydrogen seal pot and compressor seal in containers meeting the requirements in this table for open containers. These drips should not be allowed to run on the floor or in open trenches.</p> <p>b. Minimize purging of hydrogen from a decomposer into the cell room by either sweeping the decomposer with an inert gas or by routing the hydrogen to the hydrogen system.</p> <p>c. Maintain hydrogen piping gaskets in good condition.</p> <p>d. After any maintenance activities, use an appropriate technique (Table 6 to this subpart) to check all hydrogen piping flanges that were opened for hydrogen leaks.</p>